

# Conference Agenda and Registration Form



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**April 30 – May 2, 2006**

**Sunday through Tuesday**  
*(Pre Conference Warm-up Sessions, Sunday afternoon, April 30, 2006)*



**AQMD**

**The South Coast Air Quality Management District  
Announces an International Conference on:**

**Wilshire Grand Hotel**  
**930 Wilshire Blvd.**  
**Los Angeles, CA 90017**

# ULTRAFINE PARTICLES

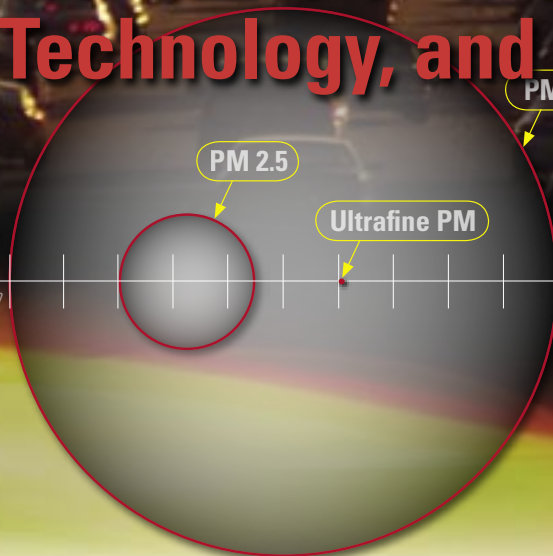
## **The Science, Technology, and Policy Issues**

Join health researchers, government policy makers, engine manufacturers, emission control manufacturers, educators and technology experts in lively and informative discussions of what needs to be done to reduce this currently-unregulated air pollutant.

**Register Now!**

# ULTRAFINE PARTICLES

## The Science, Technology, and Policy Issues



## AGENDA

### Conference Steering Committee:

- **Dr. Alberto Ayala**, California Air Resources Board
- **Brent Bailey**, Coordinating Research Council
- **Dr. John Froines**, UCLA School of Public Health
- **Dr. Eric Fujita**, Desert Research Institute
- **Dr. Thomas Hesterberg**, International Truck & Engine Corp.
- **Dr. David Kittleson**, University of Minnesota
- **Dr. Joe Kubsh**, Manufacturers of Emission Controls Association
- **Dr. Doug Lawson**, National Renewable Energy Laboratory
- **Jacques Lemaire**, AEEDA
- **Andreas Mayer**, Technik Thermische Maschinen
- **Adewale Oshinuga**, South Coast AQMD
- **Dr. Jean Ospital**, South Coast AQMD
- **Dr. Constantinos Sioutas**, University of Southern California
- **Dr. Geoffrey Sunshine**, Health Effects Institute

### Ultrafine Particle Graduate Student Research Competition

As part of this conference program, the AQMD has established a competition to award monetary prizes to five outstanding graduate students who have conducted, or are conducting individual or team research on ultrafine-particle-related projects. First prize will be \$4,000, second will be \$3,000, and the remaining three will be \$1,000. Details of the competition are provided on our conference web page at [www.aqmd.gov/tao/ultrafineparticleconf.htm](http://www.aqmd.gov/tao/ultrafineparticleconf.htm). Interested students should contact Dr. Jean Ospital at [jospital@aqmd.gov](mailto:jospital@aqmd.gov).

### Pre-Conference "Warm Up Sessions"

#### Sunday, April 30, 2006

Since many attendees will be arriving on Sunday, April 30, there will be three Pre-Conference Warm-Up Sessions offered Sunday afternoon at no additional charge. To register for these Warm-Up Sessions, be sure to check the appropriate box on the Registration Form.

**12:00 pm**      **Registration**

**1:30-2:30 pm**      **Warm-Up Session I – Particles**

An introductory course for both technical and non-technical individuals interested in learning the basics of collection, monitoring, and exposure estimation of ambient levels of particulates with emphasis on ultrafine particles.

**Dr. Constantinos Sioutas**, Co-Director Southern California Particle Center, University of Southern California

**2:50-3:50 pm**      **Warm-Up Session II – Ultrafine Particle Health Effects**

A short course for both technical and non-technical individuals explaining the health effects of particulates, with emphasis on ultrafine particles.

**Dr. John Froines**, Director of Center for Occupational and Environmental Health, University of California, Los Angeles

**4:10-5:10 pm**      **Warm-Up Session III – Ultrafine Particle Emission & Control Strategies**

A short course for both technical and non-technical individuals addressing the formation, composition, and control strategies for ultrafine particles from combustion sources.

**Dr. David Kittleson**, Professor of Mechanical Engineering, and Director, Center for Diesel Research, University of Minnesota

**5:30-8:00 pm**      **Reception in the Exhibit Area**



# ULTRAFINE PARTICLES: The Science, Technology, and Policy Issues

## AGENDA

### First Day – Monday, May 1, 2006

- 7:30-9:00 am**      **Registration & Continental Breakfast**
- 9:00-9:10 am**      **Welcome**  
**Dr. William Burke**, *Chairman, South Coast AQMD Governing Board*
- 9:10-9:45 am**      **Keynote Speakers**  
**Beatrice J.S. LaPisto-Kirtley**, *Mayor, City of Bradbury, and Governing Board Member, South Coast AQMD*  
**“Shaping Public Policy on Nanoparticles.”**  
**Andreas Mayer**, *Technik Thermische Maschinen, Switzerland*  
**“Why Choose Particle Number Instead of Particle Mass to Characterize Particle Emissions.”**
- 9:45-10:15 am**      **Break** (Refreshments in Exhibit Area)
- 10:15-12:15 pm**      **Session One – Ultrafine Particle Formation and Composition**  
This panel will describe the formation as well as the physical and chemical characteristics of ultrafine particles from combustion sources.  
**Moderator – Dr. Douglas R. Lawson**, *National Renewable Energy Laboratory*  
**Dr. David Kittleson**, *Professor of Mechanical Engineering, and Director, Center for Diesel Research, University of Minnesota*  
**“Particle Formation Mechanisms.”**  
**Dr. Zissis Samaras**, *Director, Laboratory of Applied Thermodynamics, Department of Mechanical Engineering, Aristotle University, Greece*  
**“Emission Characterization.”**  
**Dr. Jamie Schauer**, *Department of Environmental Chemistry Technology, University of Wisconsin*  
**“Chemical Speciation.”**  
**Dr. Charles Stanier**, *Associate Professor of Chemical and Biochemical Engineering, University of Iowa*  
**“Atmospheric Formation of Ultrafine Particles.”**
- 12:15-1:45 pm**      **Lunch**  
**Luncheon Speaker**  
**Dr. Robert Sawyer**, *Chairman, California Air Resources Board*  
**“Understanding the Potential Ultrafine Particle Pollution Problem and Its Impact on California’s Air Quality.”**

1:45-3:15 pm

### Session Two – Formation and Exposure to Ambient Ultrafine Particles

Panelists will discuss geographical and seasonal variations of ultrafine particle levels and exposures.

- Moderator – Dr. Rob McConnell**, *Professor, Occupational and Environmental Health, University of Southern California*  
**Dr. Scott Fruin**, *Emission Control Technology Research, California Air Resources Board*  
**“Assessment of In-Vehicle Exposure to Traffic-Related Ultrafine Particles and Other Pollutants.”**  
**Dr. Constantinos Sioutas**, *Co-Director Southern California Particle Center, University of Southern California*  
**“Form, Composition and Trends in Ultrafine Particulate Matter.”**  
**Dr. Eric Fujita**, *Research Professor, Atmospheric Sciences, Desert Research Institute*  
**“Source Apportionment of Fine Particulate Matter.”**  
**Dr. Ke Max Zhang**, *Research Associate, Department of Mechanical and Aero Engineering, University of California, Davis, Air Quality Research Center*  
**“Environmental Ultrafine Particles from Tailpipe to Ambient Background.”**

3:15-3:45 pm

**Break** (Refreshments in Exhibit Area)

3:45-5:00 pm

### Session Three – Sampling and Measurement of Ultrafine Particles

Panelists will cover the sampling and measurement of ultrafine particles in the ambient air, and from combustion sources, measured both as mass emissions and particle numbers.

- Moderator – Dr. Thomas Hesterberg**, *Director of Product Stewardship, Health, Safety, and Productivity, International Truck and Engine Corp.*  
**Dr. Imad Khalek**, *Department of Engine and Emission Research, Southwest Research Institute*  
**“Volatile Nanoparticle Number and Mass Emissions from a Diesel Engine Equipped with an Exhaust Particle Filter.”**  
**Dr. Markus Kasper**, *Managing Director, Matter Engineering, Switzerland*  
**“Nanoparticle Measurement.”**  
**Dr. Susanne Hering**, *President, Aerosol Dynamics, Inc.*  
**“Instrumentation for Measuring Ambient Ultrafine Particles.”**  
**Dr. Philip Fine**, *Atmospheric Measurement Manager, South Coast AQMD*  
**“Atmospheric Monitoring of Ultrafine Particles.”**

6:30-8:30 pm

**Dinner** (at a restaurant in Los Angeles’ Famous Chinatown)

# ULTRAFINE PARTICLES: The Science, Technology, and Policy Issues

## AGENDA

### Second Day, Tuesday, May 2, 2006

7:30-8:30 am

#### Continental Breakfast

8:30-8:40 am

#### Welcome

**Jan Perry**, Councilmember, City of Los Angeles, and Governing Board Member, South Coast AQMD

8:40-10:40 am

#### Session Four – Health Effects

Panelists will discuss the adverse health effects associated with ultrafine particles.

**Moderator – Dr. John Froines**, Director of Center for Occupational and Environmental Health, University of California, Los Angeles

**Dr. Mark Utell**, Professor of Medicine and Director of Occupational and Environmental Medicine, University of Rochester Medical Center  
“Clinical Studies.”

**Dr. Andre Nel**, Professor of Medicine, Department of Medicine, University of California, Los Angeles  
“Oxidative Stress Effects of Ambient Nanoparticles.”

**Dr. Jean-Paul Morin**, French National Institute for Health and Medical Research

“From Particles to NO<sub>2</sub> as Main Diesel Emission Toxics Trigger: A Link with Aftertreatment Strategies.”

**Dr. Ralph Delfino**, Associate Professor, Epidemiology Division, Department of Medicine, University of California, Irvine

“Cardiovascular Health and Exposure to Ultrafine Particles.”

**Dr. James Gauderman**, Associate Professor, Preventive Medicine, University of Southern California  
“Children’s Health and Traffic Exposures.”

10:40-11:10 am

#### Break (Refreshments in Exhibit Area)

11:10-12:25 pm

#### Session Five – Technology I – Engines

Panelists will discuss the state of engine technology with regard to ultrafine particle emissions.

**Moderator – Annette Hebert**, Branch Chief, Heavy Duty Diesel In-use Strategy, California Air Resources Board  
**Jon Andersson**, Chief Engineer, Chemistry and Aftertreatment, Ricardo UK, Ltd.

“Lubricant Formulation Influences on Nanoparticle Emissions from Light and Heavy-Duty Diesels.”

**Dr. Mridal Gautum**, Director of Research and Development, National Research Center for Alternative Fuels, Engines and Emissions, West Virginia University  
“Control of Toxics and Nanoparticle Emissions from CNG-Fueled, Heavy-Duty Transit Buses.”

**Patrick Charbonneau**, Vice President, Governmental Relations, International Truck and Engine Corp.

“Diesel Engine Technology: Near-Zero PM Emissions.”

**Jonathan Harris**, Engine Development Engineer, Westport Innovations

“Application of Particulate Filter Technology to a CNG Engine.”

12:25-1:55 pm

#### Lunch

##### Luncheon Speaker

**Dr. Barry Wallerstein**, Executive Officer, South Coast AQMD

“Billions and Nanos: A Southern California Air Saga.”

2:00-3:15 pm

#### Session Six – Technology II- Fuels/Aftertreatment

Panelists will describe technologies for controlling ultrafine particle emissions (measured both as mass and as numbers) from combustion sources.

**Moderator – Dr. Timothy Johnson**, Director of Emerging Technology, Corning Environmental Technology  
**Andreas Mayer**, Technik Thermische Maschinen, Switzerland

“Experience with 10,000 DPF Retrofits On-Road and Off-Road in Switzerland.”

**Dr. Alberto Ayala**, Manager, Emission Control Technology Research, California Air Resources Board

“Methods for and Characterization of Ultrafine Particles in Various Engine Exhaust Aerosols.”

**Marty Lassen**, Manager, Commercial Development and Marketing, Johnson Matthey PLC.

“TBA”

**Michael Eaves**, Executive Officer, California Natural Gas Vehicle Partnership

“Natural Gas Fuels.”

**Dr. Matti Maricq**, Ford Motor Company

“Gasoline Engines: The Impact of Aftertreatment on Ultrafine Particles.”

3:15-3:45 pm

#### Break (Refreshments in Exhibit Area)

3:45-5:00 pm

#### Session Seven – Policy Issues

Representatives from pollution control agencies, research institutions, private industry, and environmental organizations will present remarks regarding their perspectives on future public and private policies designed to reduce ultrafine particle emissions (measured both as mass and particle numbers).

**Moderator – Dr. Jean Ospital**, Health Effects Officer, South Coast AQMD

**Dr. John Froines**, Director of Center for Occupational and Environmental Health, University of California, Los Angeles

**Representative**, U.S. Environmental Protection Agency  
**Lynn Terry**, Deputy Executive Officer, California Air Resources Board

**Andreas Mayer**, Technik Thermische Maschinen, Switzerland

**Patricia Monahan**, Senior Analyst, Clean Vehicles Program, Union of Concerned Scientists

5:00 pm

#### Closing Remarks and Conclusion of Conference

**Dr. Jean Ospital**, Health Effects Officer, South Coast AQMD

For more information about the main conference, call Larry Kolczak at (909) 396-3215.

# ULTRAFINE PARTICLES

**The Science, Technology, and Policy Issues**

## Registration Form

Please register me for the Ultrafine Particle Conference  
April 30 – May 2, 2006 at the  
Wilshire Grand Hotel, 930 Wilshire Blvd., Los Angeles, CA

☐ Please mark here if you plan to attend the Pre-  
Conference Warm-Up Sessions, Sunday – April 30, 2006  
(these are included in the conference registration fee).

☐ Check here for vegetarian meals.

Name \_\_\_\_\_

Title \_\_\_\_\_

Company/Organization \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Country \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

### Registration Fee (Note Earlybird Discount)

**\$400** for Non-Governmental Attendees (\$300 if registration and  
check are received on or before April 18, 2006)

**\$200** for Government Attendees and Environmental  
Organizations (\$150 if registration and check are received  
on or before April 18, 2006)

- Researchers and Graduate Students call Vicki White  
(909) 396-3436 for special registration arrangements.

Make Checks Payable to:

**“SCAQMD”**

Sorry, we cannot accept credit card payments

### Mail Registration Form and Check to:

Ultrafine Particle Conference  
South Coast AQMD  
21865 Copley Drive  
Diamond Bar, Ca 91765

Questions: Call Geri Bowen at (909) 396-2778.

Please cut or photocopy for mailing.

## SPONSORS

California Environmental Protection Agency  
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## Supporting Organizations

American Association of Aerosol Research  
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American Lung Association of Orange and Los Angeles Counties  
Asthma and Allergy Foundation of America  
BreatheCalifornia of Los Angeles County  
California Air Pollution Control Officer's Association  
Coalition for Clean Air  
Communities for a Better Environment  
Natural Resources Defense Council  
Southern California Particle Center  
Union of Concerned Scientists  
Air and Waste Management Association, West Coast Section  
Coordinating Research Council

Exhibitor opportunities still available,  
call Ms. Drue Ramirez at (909) 396-3237.



## Conference Registration Includes:

- Three Pre-Conference Warm-Up Sessions on Sunday April 30.
- All Conference Keynote and Panel Sessions Monday and Tuesday, May 1 and 2.
- Exhibits of the Latest Technologies for Measuring and Controlling Ultrafine Particles.
- Meals Both Days of the Main Conference (Continental Breakfast and Lunch Monday and Tuesday, and a Dinner Monday Night in L.A.'s Chinatown).
- A Reception (light refreshments) in the Exhibit Area Sunday Evening, April 30.
- A Conference Agenda Packet and Resource Materials.
- A CD of Conference Presentations will be mailed to attendees after the event.



## Hotel Reservations

**Call 888-773-2888**

The Wilshire Grand Hotel, is conveniently located in downtown Los Angeles. The "Ultrafine Conference" rate is \$110 per night plus tax if reserved by April 18. Overnight parking for guests is an additional \$25. The hotel's website is <http://www.wilshiregrand.com>.



South Coast  
Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765-4178

**Forwarding Service Requested**

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**The Science, Technology, and Policy Issues**

**April 30 – May 2, 2006**

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and Registration Form**